

**Listing of the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Eight Times Amended) An orthopaedic spatial fixation system for holding bone parts comprising a plurality of fixation plates wherein each plate includes a body portion having  $n$  [holes] attachment structures positioned therein, whereby said [holes] attachment structures are substantially positioned along an arc of  $\alpha^\circ$  of a circle defined by a diameter  $d$ , and a [the cord] chord length between adjacent [holes] attachment structures is substantially equal to [1]  $\frac{1}{n}$  and is substantially equal between all attachment structures, and

$$d \sim l \left( \sqrt{\frac{1}{\tan^2 \left( \frac{\alpha}{2n} \right)} + 1} \right)$$

[and] whereby [the diameter  $d$  for each plate within the system is unique, and] the value for  $n(360/\alpha)$  [for each consecutive plate diameter  $d$ ] in the system is a multiple of 3, and

wherein at least two of the fixation plates are connected to each other by at least six substantially rigid, adjustable length struts, wherein each of the struts is disposed substantially diagonally with respect to its adjacent struts.

2. (Three Times Amended) The orthopaedic spatial fixation system of claim 1 further comprising bone pins for interfacing the bone parts and plates; and,

[a] wherein the [plurality of] struts [that] extend between the plates to hold the plates in a selected position relative to one another and relative to the bone parts;

wherein the struts are attached to the plates at the [holes] attachment structures; and,

wherein [a plurality of] the struts have adjustable length sections for varying the length of the strut to adjust the relative position of the plates.

3. (Amended) The orthopaedic spatial fixation system of claim 2 wherein the [holes] attachment structures on at least one of the plates are one hundred twenty degrees ( $120^{\circ}$ ) apart.
4. (Amended) The orthopaedic spatial fixation system of claim 1 wherein rotation of one plate one hundred twenty degrees ( $120^{\circ}$ ) relative to an adjacent plate results in the same alignment of adjacent [holes] attachment structures as before such rotation of the plates.
5. (Amended) The orthopaedic spatial fixation system of claim 1 wherein the plates are symmetrically configured so that if one plate is placed over an adjacent plate, the [holes] attachment structures in each plate can be aligned.
6. (Amended) The orthopaedic spatial fixation system of claim 5 wherein the plates are symmetrically configured so that one plate can be flipped over without affecting the alignment of adjacent [holes] attachment structures.
7. (Amended) The orthopaedic spatial fixation system of claim 2 wherein there are two plates and each plate includes 3 [holes] attachment structures.
8. (Four Times Amended) The orthopaedic spatial fixation system of claim 7 wherein  
  
[there are] the struts comprise only six struts each having a first end and a second end;  
  
the first end of each strut is attached to one of the plates and the second end of each strut is attached to the other plate;

the ends of the struts are attached to the plates at the [holes] attachment structures; and, each [hole] attachment structure accommodates two strut ends, one from each of two adjacent struts.

9. (New) The orthopaedic spatial fixation system of claim 1, wherein the attachment structures are holes.

10. Cancelled

11. (New) The orthopaedic spatial fixation system of claim 1, wherein the circle comprises a groove and the attachment structures are clamps attached to the groove.

12. (New) The orthopaedic spatial fixation system of claim 1, further comprising markings or etches to designate the attachment structure positions.

13. (New) The orthopaedic spatial fixation system of claim 1, further comprising one or more plates being multiple diameter plates having a second set of attachment structures.

14. (New) The orthopaedic spatial fixation system of claim 13, wherein the second set of attachment structures is not spaced according to the diameter equation and chord length limitations.

15. – 35. Cancelled

36. (New) An orthopaedic spatial fixation system, comprising a plurality of arcuate shaped fixation plates, wherein each plate comprises a plurality of attachment structures, at least some of which have substantially uniform sizes and a geometrical arrangement defined whereby the attachment structures are: (a) in sets of three, (b) spaced substantially 120

degrees apart from each other along an arc of the fixation plate, and (c) substantially equally spaced apart; wherein rotating a first one of the fixation plates substantially 120 degrees from a starting position in a plane substantially parallel to another one of the fixation plates causes the first fixation plate to present the same geometrical arrangement of attachment structures as the geometrical arrangement of the attachment structures of the another plate, and

wherein at least two of the fixation plates are connected to each other by at least six substantially rigid, adjustable length struts, wherein each of the struts is disposed substantially diagonally with respect to its adjacent struts.

37. (New) The orthopaedic spatial fixation system of claim 36, whereby rotating the first fixation plate substantially 60 degrees from the starting position in a plane substantially parallel to another one of the fixation plates presents the same geometrical arrangement of attachment structures as the geometrical arrangement of the attachment structures of the another plate.

38. (New) The orthopaedic spatial fixation system of claim 36, wherein the number of attachment points is a multiple of six, providing 2x3 symmetry.

39. (New) The orthopaedic spatial fixation system of claim 36, wherein at least one of the fixation plates is ring shaped.

40. (New) The orthopaedic spatial fixation system of claim 36, wherein the plurality of attachment structures is positioned such that in use, at least some of the attachment structures on one of the plates move into alignment with at least some of the attachment structures on another plate as adjustment is effected.

41. (New) The orthopaedic spatial fixation system of claim 36, wherein the attachment structures are positioned along an arc of  $\alpha^\circ$  of a circle defined by a diameter d, and a chord

length between adjacent attachment structures is substantially equal to  $l$ , and the defined relationship comprises

$$d \sim l \left( \sqrt{\frac{l}{l \sin^2 \left( \frac{\alpha}{2n} \right)} + 1} \right)$$

42. (New) The orthopaedic spatial fixation system of claim 36, wherein the orthopaedic spatial fixation system is adapted to be positioned on a patient.

43. (New) The orthopaedic spatial fixation system of claim 36, wherein the struts comprise only six adjustable struts, a first end of each of the struts connected to one of the attachment structures on one of the fixation plates and a second end of each of the struts connected to one of the attachment structures on another one of the fixation plates, wherein the attachment structures connected to the struts are each connected to two struts.

44. (New) The orthopaedic spatial fixation system of claim 36, wherein the struts comprise only six adjustable struts, each strut connected at a first end to one of the attachment structures of one of the fixation plates and each strut connected at a second end to one of the attachment structures of another one of the fixation plates, wherein each attachment structure that is connected to a strut is only connected to one strut.

45. (New) An orthopaedic spatial fixation system, comprising a plurality of fixation plates wherein each plate comprises a plurality of attachment structures, at least some of the attachment structures being in sets of three attachment points, each plate having a geometrical arrangement defined whereby the three attachment points in a set are spaced substantially 120 degrees apart from each other along an arc of the fixation plate; wherein at least two of the fixation plates are connected to each other by at least six substantially rigid, adjustable length struts, wherein each of the struts are disposed substantially diagonally with

respect to its adjacent struts, and the number of attachment structures on each plate being a multiple of 3, whereby rotating the first fixation plate substantially 120 degrees from a starting position in a plane substantially parallel to another one of the fixation plates presents the same geometrical arrangement of attachment points as the geometrical arrangement of attachment points presented to the struts when the first fixation plate is in the starting position.

46. (New) The orthopaedic spatial fixation system of claim 45, further comprising an accessory adapted to be attached to one or more of the fixation plates.
47. (New) The orthopaedic spatial fixation system of claim 45, wherein the orthopaedic spatial fixation system is adapted to be positioned on a patient.
48. (New) The orthopaedic spatial fixation system of claim 45, wherein the struts comprise only six struts, a first end of each of the struts connected to one of the attachment structures on one of the fixation plates and a second end of each of the struts connected to one of the attachment structures on another one of the fixation plates, wherein the attachment structures connected to struts are each connected to two struts.
49. (New) The orthopaedic spatial fixation system of claim 1, wherein the chord length between adjacent attachment structures is between about .48 inches and about .52 inches.
50. (New) The orthopaedic spatial fixation system of claim 36, wherein a chord length between adjacent attachment structures is between about .48 inches and about .52 inches.
51. (New) The orthopaedic spatial fixation system of claim 45, wherein a chord length between adjacent attachment structures is between about .48 inches and about .52 inches.